

**California's Janitorial Industry:
Does Higher Compensation for Unionized
Workers Lead to Greater Production
Pressure and Higher Injury Rates?**

Report to the Commission on Health and
Safety and Workers' Compensation

Frank Neuhauser
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March 2017

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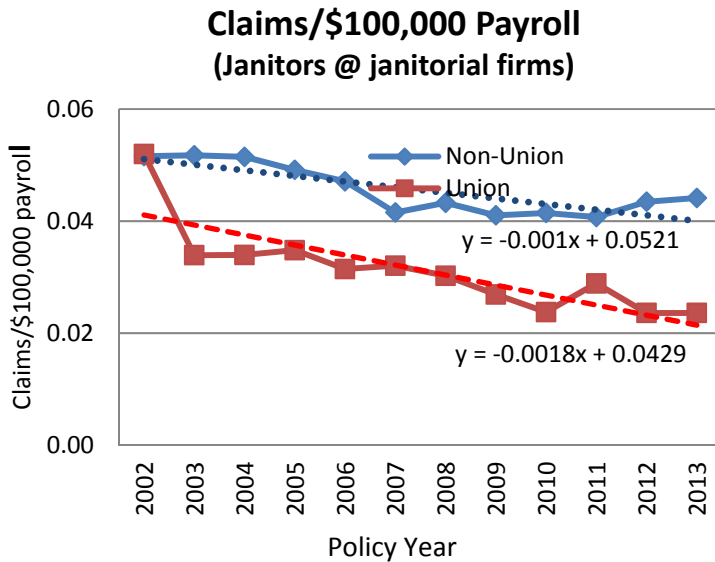
Executive summary

In the 1990s and the 2000s, the Service Employees International Union (SEIU) successfully bargained to improve pay and expand employment benefits for janitorial workers in California. The most important benefit expansion achieved was that of employer-based health-care benefits in a wider range of collective bargaining agreements (CBAs) and additional union locals. Union advocates have argued that unionized firms, faced with higher labor costs on account of these benefits, pressed workers to increase the square footage that they clean within the same work time and that the greater workloads have led, in turn, to higher injury rates and more serious injuries.

This study examines whether injury rates increased at unionized janitorial firms. Even if the rates did not increase, did the trends in injury rates vary between unionized and non-unionized firms? Finally, if the trends were different, what types of injuries could be driving the differences? During the study, we also added another objective: determining whether the premium rates faced by employers fairly reflected any differences in the losses experienced by unionized and non-unionized firms—that is, did one sector subsidize the other sector with respect to workers' compensation (similar to the cross-subsidy seen in the construction industry in the 1980s and 1990s)?

With the assistance of the signatories to the CBAs, we were able to identify all the unionized firms. The WCIRB and the DWC identified janitorial firms in their data and matched the unionized firms. This identified two groups of firms in the janitorial industry: those that were signatories to the CBAs (unionized firms), and those that were not (non-unionized firms). We then used data on the losses, premiums, and payroll of all janitorial firms to identify injury rates, loss rates, and premium rates separately for unionized and non-unionized firms. We then evaluate the trends in these rates over time.

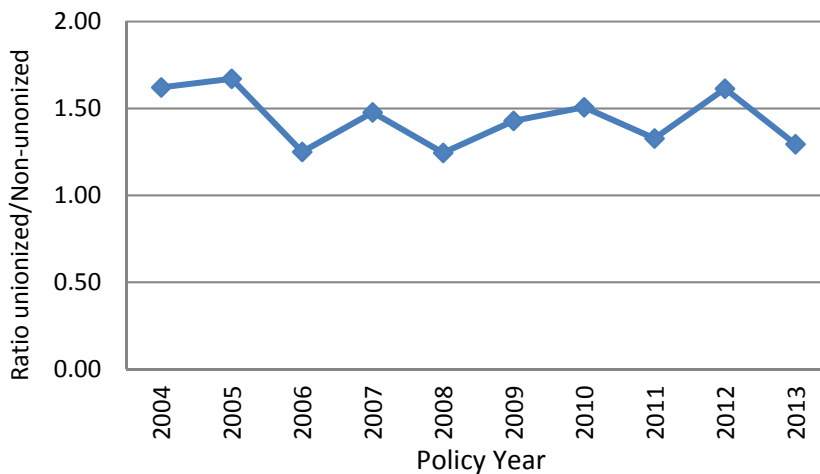
Our findings should dispel concerns that higher labor costs for unionized firms drove production pressure that resulted in more injuries at unionized firms. Janitors at unionized firms have lower injury rates. Those injury rates are trending downward as well, at least as quickly, if not more quickly than at non-unionized firms.



In addition, the medical cost per claim is lower at unionized firms. This may indicate that injuries are not only fewer in number but less severe. Alternatively, unionized firms, which are larger, may have human resource (HR) units that manage claims better.

Finally, the examination of insurance costs for unionized employers relative to non-unionized firms did raise some concerns. Despite having much better safety experience and lower costs per claim, unionized firms paid insurance rates similar to those of non-unionized firms. The ratio of premium/losses for unionized firms was consistently 40% higher than that for non-unionized firms, even though these ratios should be nearly equal.

Comparison of Premium to Incurred Losses^a (Unionized/Non-unionized)



^a incurred losses as reported at first report

No evidence has been found that the higher labor costs faced by unionized janitorial firms are driving higher injury rates. If anything, the safety and claims experience of unionized firms is much better than that of their non-unionized counterparts. At the same time, unionized firms appear to be subsidizing the workers' compensation insurance costs of non-unionized firms, depriving the unionized employers of the full advantage of better safety experience and claims handling. Insurers have many tools to price the insurance policies appropriately, but this does not appear to be happening. The industry could consider a split class for the 9008 class code to make pricing more equitable.

One final note: the findings here might also inform how the substantial changes in the California minimum wage will raise costs for employers and create the same dynamic explored above, which might affect worker injury rates across all industries. The minimum wage was increased to \$10.00/hour as of January 1, 2016 (California Senate Bill 3) and will continue to rise, until it is \$15.00/hour in 2022. These minimum wage changes are of the same magnitude as the cost of health-care benefits for unionized workers. If higher compensation costs for unionized workers had been associated with higher injury rates, we might be concerned that increasing the minimum wage would have similar consequences. But the better safety record at unionized janitorial firms should allay fears that large increases in the minimum wage will lead to higher (i.e., worse) injury rates.

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January 2017

Introduction

In the 1990s and 2000s, the Service Employees International Union (SEIU) successfully bargained to improve pay and expand employment benefits for janitorial workers in California. The most important benefit expansion achieved was that of employer-based health benefits in a wider range of collective bargaining agreements (CBAs) and additional union locals. Health insurance is a high-cost benefit for employers and a benefit highly valued by workers (Olson, 2002; Royalty, 2008). Employment-based health-care benefits can make jobs more attractive, reducing employee turnover (Buchmueller & Valetta, 1996; Cooper & Monhiet, 1993; Currie & Madrian, 1999). Lower turnover reduces employer costs for hiring and training. Lower turnover may also have an important impact on workplace safety because it means that the workforce is more experienced (Breslin & Smith, 2006; Neuhauser et al., 2010).

For firms with lower-paid workers, such as janitors, health insurance can represent a large fraction of total labor compensation and a substantial fraction of total employer cost. Data on the health insurance costs specific to employers that are signatories to the CBA in California were not available. However, the Bureau of Labor Statistics (BLS) conducts the quarterly Employer Cost of Employee Compensation Survey, which tracks the wages and fringe benefits of employees. The average cost of health insurance across all workers and employers is \$2.84/hour.¹ Because roughly 60% of workers are covered by employer-based health insurance, the average cost to employers for workers actually covered by health insurance is about \$4.70 per hour. Alternatively, we can use the California HealthCare Foundation (CHCF)/Kaiser Family Foundation annual survey of employers in California. The CHCF finds that the average employer contribution to health insurance in 2014 was \$5,666 for single coverage and \$13,109 for family coverage.² Consequently, for workers earning around an average wage of \$11.10 per hour, health insurance represents a major increase in compensation over jobs that have similar pay but lack

¹ <https://www.bls.gov/news.release/pdf/ecec.pdf>.

² <http://kff.org/health-costs/report/2014-employer-health-benefits-survey/>.

health insurance coverage. But health insurance also creates a substantial increase in labor costs for employers. Even for unionized firms at which health insurance is a long-standing benefit, the long and steep rise in health-care costs means that their compensation package is increasingly costly. The average premium for employer-sponsored health insurance rose 203% between 1999 and 2015 (Long et al., 2016). During the same period, wages for lower-wage workers were stagnant or declining (Mishel, 2015).

The market for janitorial services in California is competitive, with a limited number of large and medium-size firms and many small firms whose primary business is janitorial services. Only a small proportion of firms (7%), which nevertheless represent a large proportion of employment (72% of reported insured payroll) are signatories to the CBA.³ Non-unionized firms often do not offer health-care benefits. Consequently, the provision of health-care benefits is an important factor in the firms' ability to be competitive when bidding on cleaning contracts.⁴

Employers can respond to higher labor costs by increasing prices, reducing profits, or improving productivity. In a highly competitive environment, increasing prices may not be practical. To the extent that employers try to maintain profit margins, increasing the productivity of the labor force becomes a key strategy. Labor productivity can be raised in many different ways, including greater capital investment, reduced employee turnover and training costs, and improved work organization. However, union advocates have argued that employers increase productivity by pressing workers to clean more square footage in the same work time, often without improvements in technology or organization. The union's perception was that increasing work demands have translated into higher injury rates and more serious injuries.

This study had three broad objectives:

- Determine whether injury rates at unionized janitorial firms are increasing.
- Even if those rates are not increasing, do the injury rates for janitors at unionized firms show a different trend than those for janitors at non-unionized firms?

³ Not all employment at firms that are signatories to the CBAs is covered by the CBAs. Some janitors are in geographic areas not covered by the CBA, and some occupations at covered firms are outside the CBA. The amount of payroll outside the CBAs is unknown, but it is also possible that some of the non-covered employees are offered similar benefits, even when they are not required.

⁴ While employment-based health insurance is usually thought of as increasing the cost of labor, it might also lead to reductions in labor costs, sometimes substantially so. Arindrajit Dube and Ken Jacobs (2007) find that reducing grocery workers' access to health-care benefits dramatically increased turnover in employment, which suggests, symmetrically, that offering such benefits could lead to a significant increase in the stability of an employer's workforce.

- If trends at unionized firms are different, can we identify which types of injuries, such as those that indicate excessive exertion, might be driving the differences?

During the study, we also developed data on the way in which employers' insurance loss experience differed by whether firms were CBA signatories. In the 1980s, the construction trades exhibited subsidization of non-unionized, low-wage firms by unionized contractors. That subsidization led California to develop split-class codes, assigning different premium rates to unionized and non-unionized employers in the building trades. Because the structure of the janitorial industry is similar to that of the construction industry in many ways, we also evaluated whether the janitorial industry exhibited subsidization of the non-unionized sector by the unionized sector in the workers' compensation insurance market.

This study was funded by the Commission on Health and Safety and Workers' Compensation (CHSWC).

Data

The Workers' Compensation Insurance Rating Bureau of California (WCIRB) divides all insured workers into 500 class codes, grouping workers by similar occupation and risk. Class code 9008 covers janitorial workers, including those at primarily custodial firms as well as those at firms primarily in another business, such as retail groceries, that also employ janitors. The WCIRB supplied data covering all insured employers whose primary business was janitorial work. These firms were identified as ones with class code 9008 as the governing class (the class accounting for the largest proportion of premiums).

As part of its function to develop premium rate recommendations for the California Department of Insurance, the WCIRB collects information on all occupational injuries and illnesses at insured firms and the underlying payroll and premiums for those firms. Using these data, the WCIRB recommends average rates (called "pure premium" or "benchmark" rates) for each of the 500 separate class codes. These average rates are expressed as a percentage of payroll for workers in each class and become the basis for workers' compensation insurance premium rates.

The WCIRB also uses the data collected on each individual employer's workers' compensation policies to develop employer-specific experience rating factors, called X-mods. Employers with better than average safety records have X-mods below 1.00, and those with

worse than average experience have X-mods above 1.00. Insurers then use an employer's X-mod and payroll in combination with manual rates as the starting point for calculating an employer's premium for a policy year. Manual rates are premium rates published by individual insurers, usually based primarily on the benchmark rates published by the WCIRB.

For each class at each employer, the WCIRB collects data on payroll. The bureau's data on payroll, referred to as "exposure," is slightly different from actual payroll. Only base wage payments are included, and differentials, such as for supplemental pay above the base hourly wage for overtime, are not included.⁵

The WCIRB collects injury and loss data for each employer and policy year at several points in time. We use the data collected on the first report to the bureau, submitted for policies as of 18 months after the inception of the policy or 6 months after the close of the policy year. Other reports are submitted at 30, 42, 54, 66, and 78 months and later. Because workers' compensation claims are often open for years, the incurred costs estimated at the first report often change with subsequent reports. We use the first report because it allowed us to analyze comparable data for every policy year through 2013.

The WCIRB identified unionized employers by matching a list of the signatories to the CBAs to names on policies for all insured firms with janitorial workers as the primary class code. Several signatory firms could not be matched by the WCIRB. This author did additional investigation and identified alternative names and addresses for many firms, which the WCIRB was then able to match. Virtually all the unionized janitorial firms were ultimately identified among the WCIRB policies. The exceptions appear to be firms with multistate operations that were signatories to all major CBAs nationally but that may not have had activity in California in a particular policy year.

⁵ Another important exclusion is a portion of wages for officers of a corporation.

Findings

Injury rates

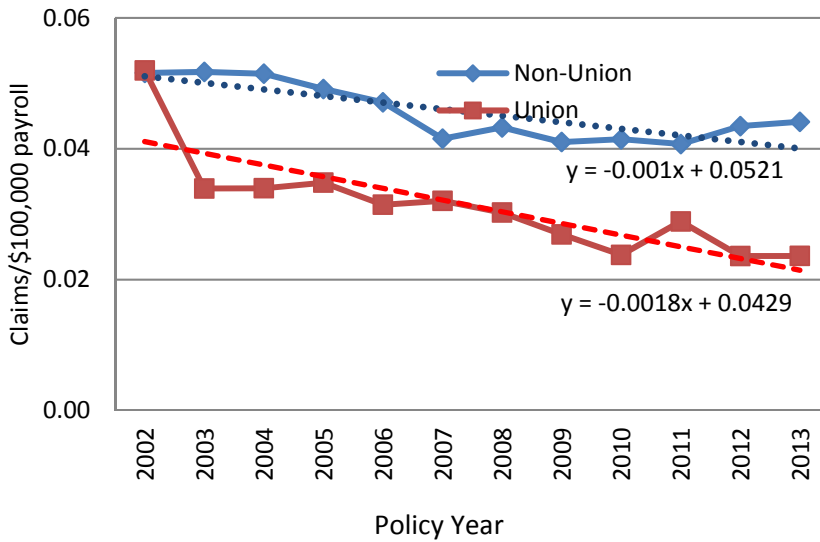
Our primary focus is comparing the level of injuries and trend in injury rates over time at unionized and non-unionized firms. The concern raised to the CHSWC and the primary motivation for this study is that injury rates may be increasing for unionized workers because of pressure to clean a substantially larger area per shift.

We start this comparison by estimating the number of claims reported per \$100,000 of payroll.⁶ Because the WCIRB collects the payroll data by class code, we can separately calculate rates for janitors and for other workers (non-janitorial) at janitorial firms. The two charts below compare injury rates over time for unionized and non-unionized firms with the janitors and all other occupations broken out separately.

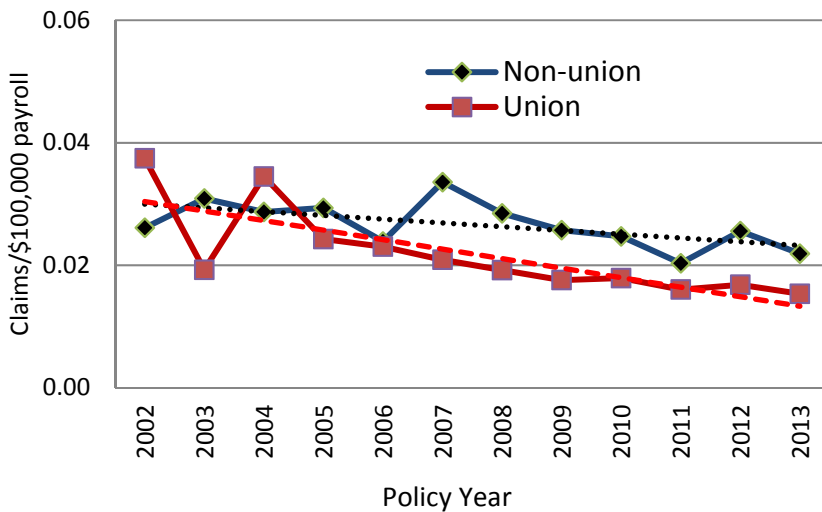
It is clear that the injury rates, using the denominator of \$100,000 of reported payroll, are much lower at unionized firms. The gap between the unionized and non-unionized firms has increased over time. Currently, the injury rate for janitors at unionized firms is about half that at non-unionized firms. The gap is smaller for other occupations at these firms.

⁶ This is an imperfect measure. A better measure would be one with a denominator based on hours worked, such as the BLS full-time equivalent (FTE), which encompasses the hours of actual exposure to injury. However, the payroll numbers are what is available, and they likely work well because hourly wage rates, independent of fringe benefits fall in a narrow range for the janitorial industry.

Claims/\$100,000 Payroll (Janitors @ janitorial firms)



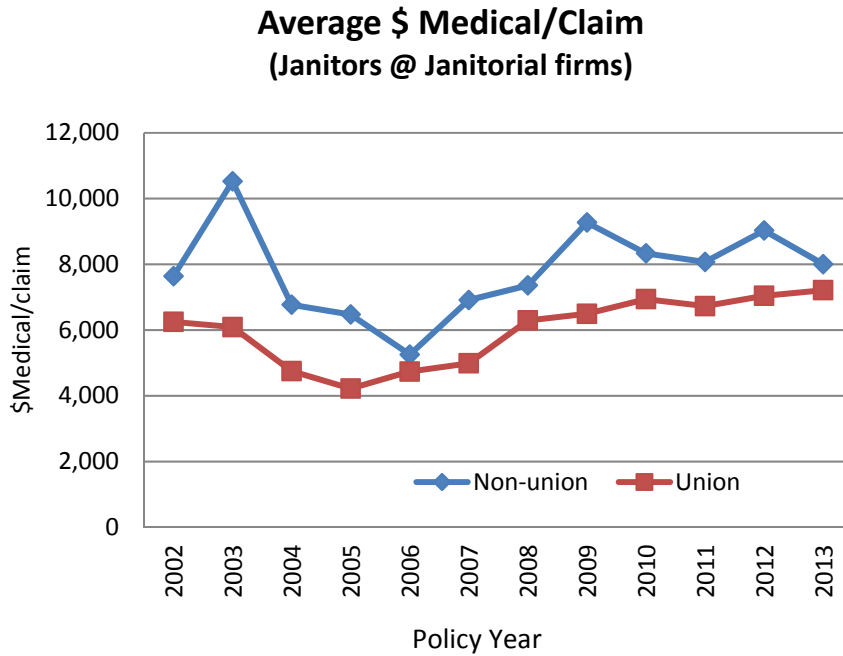
Claims/\$100,000 Payroll (Other occupations @ janitorial firms)



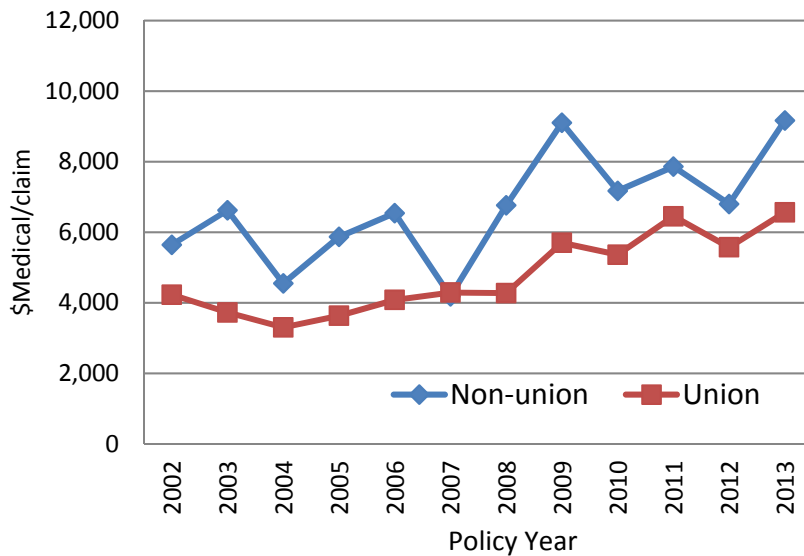
It is clear that the trend in injury rates is very similar between unionized and non-unionized firms. No evidence has been found that any changes in workloads at unionized firms in response to competitive pressure are driving any increase in injury rates, at least in comparison to non-unionized firms.

Injury severity

Another concern of worker advocates was that increased work demands may have resulted in more severe injuries at unionized firms. This does not appear to be the case. Medical cost per claim is one way to measure severity, with more severe injuries, on average, incurring higher health-care costs. As in health insurance, medical costs in workers' compensation have trended upward. However, the level of average medical costs for claims is consistently lower at unionized firms, and the trends at both unionized and non-unionized firms are similar.



Average \$Medical/Claim
Other occupations @ Janitorial firms

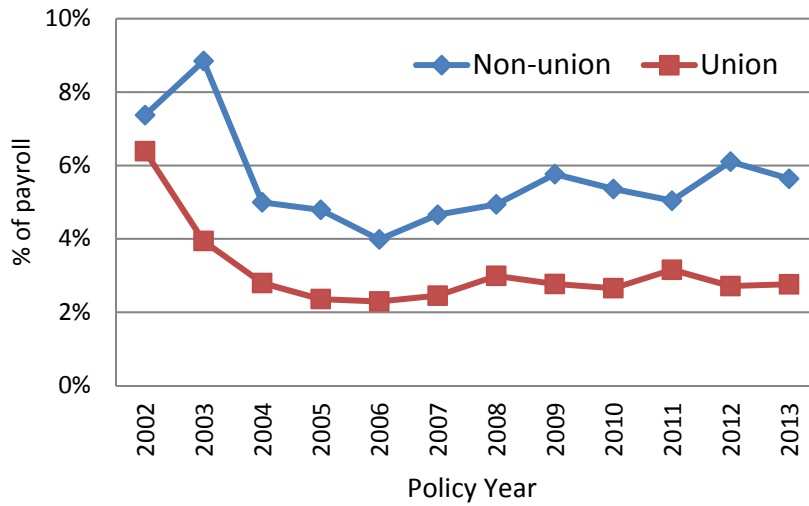


Nothing in the data suggests that the injuries experienced by workers at unionized janitorial firms are more severe than those at non-unionized firms. If anything, the data on medical costs suggest that the injuries are less severe.

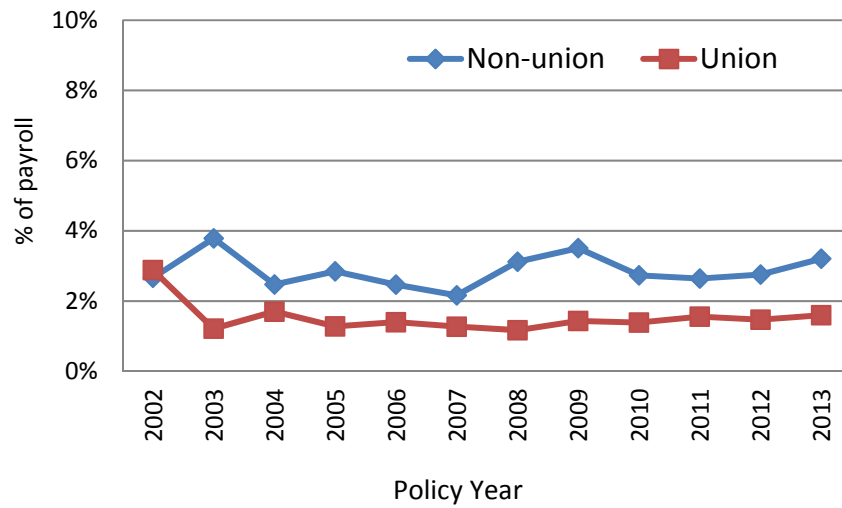
Total losses/payroll

The combination of lower injury frequency and lower cost/injury results in much lower underlying costs for occupational injuries at unionized janitorial firms. Measured as a percentage of payroll, the losses (medical and indemnity costs) for janitorial workers are about twice as high at non-unionized firms. Even in nonjanitorial occupations at these firms, non-unionized firms have a substantially higher cost, but the differential is narrower in firms' secondary occupations.

**Total Losses/Payroll
(Janitors @ janitorial firms)**



**Total Losses/Payroll
(Other occupations @ janitorial firms)**



Are employer premiums equitable?

As shown above, employers that are signatories to CBAs exhibit lower injury rates, and treatment of those injuries has lower average costs. The much better safety records (injury rates) and much lower incurred costs per claim (medical, indemnity, and total) should be reflected in much lower premium rates for unionized employers relative to their non-unionized counterparts. We can test whether premium costs are charged equitably in two ways. First, we can compare unionized and non-unionized employers to industry averages (pure premium rates). Unionized employers should pay less, relative to the pure premium rate. Non-unionized employers should, on average, pay more relative to the pure premium rate. Second, we can compare the premiums charged by insurers to the actual losses experienced by employers. If premiums are equitable, the ratio of the premium to losses should be approximately the same at unionized and non-unionized firms.

Before deregulation in the mid-1990s, actual premiums tracked the pure premium rates quite closely. Since deregulation, the pure premium rates merely provide guidance for insurers. Although insurers tend to maintain the relative premium rates between the class codes developed by the WCIRB, they offer multiple premium *levels*, applying different levels to employers with different risk profiles. Insurers do this using several tools:

- Under the umbrella of an insurer group, there are often several insurance companies. Each company targets a specific market-risk segment by offering different rates. Some companies in a group discount the pure premium level. Other companies in the same group offer rates substantially above, or at a multiple to, the pure premium rates. Lower-risk segments, as interpreted by each individual insurer, are presumably offered lower average premium levels.⁷
- The WCIRB maintains data on the experience of all firms. Firms above a certain level of premium are subject to experience rating. Because of the high premium rates for janitorial work, nearly all janitorial firms are experience rated using X-mods, which reflect employers' safety experience. X-mods of less than 1.0 (better than average experience) will lower employers' premiums. X-mods of more than 1.0 will raise premiums.

⁷ The State Compensation Insurance Fund is an exception in that it as a single company and uses tiered rates within the company, with higher-risk employer paying much higher rates associated with higher risk tiers.

- Finally, insurers implement multiple credits and debits that can lower or raise premiums depending upon employer characteristics.

Everything else being equal, we expect the ratio of the actual premium rates paid relative to the underlying pure premium rate to be lower for unionized firms than for non-unionized employers. This would reflect the better past safety and loss experience of unionized employers.

The table below compares the premiums actually charged to the underlying pure premium rates. We control for the policy year and the average expected losses in the industry (pure premium) and whether firms have multiple class codes (more complexity for insurers). The key variable is *Union*, which represents the impact of being an employer that signed a CBA relative to non-unionized firms. The dependent variable is the natural log of the actual premium charged by the insurer.

Calculated Impact of Union Status on Premium Rate Relative to Losses

Dependent variable = $\ln(\text{Actual Premium})^1$	
Constant	1.587*** (0.030)
Union	0.031 (0.020)
Ln (expected losses) ²	0.883*** (0.003)
Multi-class	0.161*** (0.013)
Policy year 2002	-0.054** (0.020)
Policy year 2003	0.020 (0.020)
Policy year 2004	0.052* (0.021)
Policy year 2005	-0.038 (0.021)
Policy year 2006	-0.054** (0.021)

Policy year 2007 (excluded category)	
Policy year 2008	-0.003 (0.021)
Policy year 2009	-0.012 (0.022)
Policy year 2010	0.034 (0.020)
Policy year 2011	0.089*** (0.020)
Policy year 2012	-0.097*** (0.020)
Policy year 2013	-0.153*** (0.020)
<hr/>	
N =	7,803
Adj. R ²	0.950

1. Actual premium is the premium reported to the WCIRB on the policy. Certain exclusions apply as described in the text.

2. Expected losses are the pure premium rate for the policy year times the reported exposure, calculated at the individual class level and summed to the employer level.

* = $p < .05$; ** = $p < .01$; *** = $p < .001$.

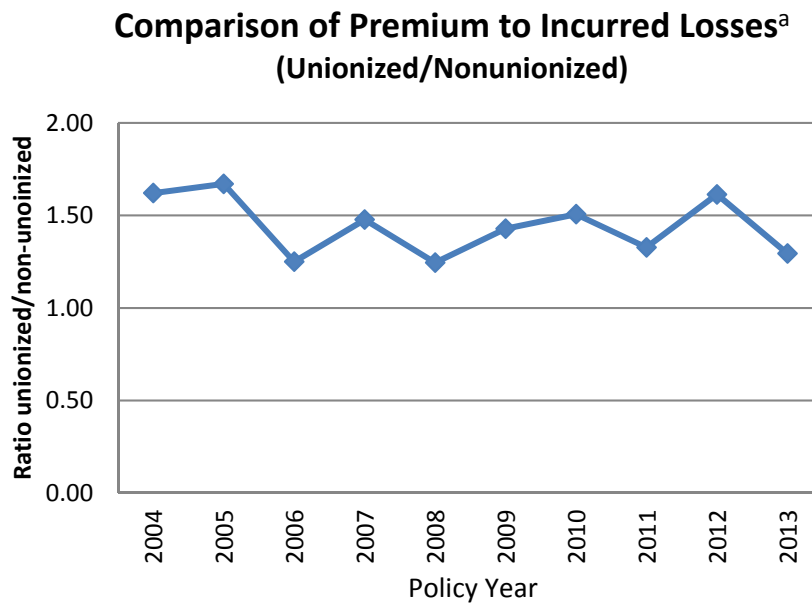
Given the historically better safety and loss experience at unionized firms, we would have expected the coefficient on *Union* to be negative, substantial, and significant. However, it is positive, small, and not significant. Relative to the baseline premium rates developed by the WCIRB, we do not observe insurers pricing the unionized employers' risk differently from that of non-unionized employers. In the table, we see that actual premium rates track the pure premium rates closely for both unionized and non-unionized employers.

Even if the upfront pricing seems to rate the risk of the unionized firms incorrectly, it might be that insurers correctly discounted the value of the previous experience, anticipating that the current policy year would be different. We can evaluate this by comparing the actual premiums charged to the actual losses reported for the policies. Actual losses are subject to a great deal of random variance around the expected mean. But if insurers accurately reflect the differential risk between unionized and non-unionized employers in the premiums charged, then

on average, the ratio of premiums charged to actual losses should be similar for both types of employers.

To evaluate the premiums charged against actual losses, we first calculated the ratio of premium/losses for each group (unionized and non-unionized firms). Then we compare the ratio between the groups. If, as we expect, the ratio of premiums to losses is similar for both groups (reflecting equitable pricing), then the ratio in the chart below should vary around 1.0 for each year.

However, what we observe is different. Unionized firms pay substantially higher premiums on policies relative to the losses experienced. The differential is rather high, around 1.40. That is, on this basic measure, unionized firms are paying about 40% more for the same level of losses as their non-unionized counterparts. Despite the potential for insurers to apply differential premium rates, debits and credits as well as application of X-mods, unionized employers are still left with much higher premium cost for the same level of losses incurred.



^a incurred losses as reported at first report

Discussion

The data make it clear that, despite the pressure of higher labor costs, employers' actions do not increase the risk of occupational injuries at unionized firms. We observe that injury rates are lower at firms that have signed a CBA and claims may be declining more rapidly at unionized firms.

The lower injury rates among janitors at unionized firms have several possible explanations. Better safety, a likely explanation, might be driven by better training and supervision at unionized firms or by the higher experience level of their workers. Turnover among employees has been identified as being correlated with the presence or absence of health-care benefits (Dube & Jacobs, 2007). Another explanation could be larger investments in safety, such as better and newer equipment at unionized firms, which are, on average, much larger.

An alternative explanation is that unionized firms have much better wage reporting. The safety differential may be, in part, an artifact of underreporting of payroll by non-unionized employers. Underreporting of payroll tends to be substantial in higher-premium-class codes (Neuhauser & Donovan, 2007a). The same level of payroll underreporting is unlikely to affect unionized-employer policies because employer contributions to workers' Taft-Hartley health and welfare trusts are rigorously monitored by both labor and management trustees. Better payroll reporting at unionized firms would make our denominator for injury rates larger and the ratio lower, all other things being equal. Differences in payroll reporting could result in the appearance of lower injury rates at unionized firms, even if the number of injuries per \$100,000 payroll was the same.

We observed a lower average medical cost per claim at unionized firms and suggested that this might be the result of lower average severity. An alternative explanation is that because the unionized firms, on average, have more employees than non-unionized firms, they have better HR processes in place to handle claims. For example, unionized firms could more quickly and more often direct claimants to the employer's medical provider network, controlling claim costs. Yet another explanation is that more frequent accommodation with modified work may lead to earlier return to work among injured workers at unionized firms, in turn reducing medical as well as indemnity costs. The argument of better claims handling is supported by our observation that the \$medical/claim ratio for all other occupations at the firms (other than janitors) shows a similar lower average at unionized vs. non-unionized employers.

A striking issue related to workers' compensation costs among janitorial firms is the degree to which unionized employers are apparently subsidizing non-unionized employers in insurance. Unionized employers are paying much higher premiums relative to their losses than their non-unionized counterparts. Because workers' compensation insurance is a high-cost component of employee compensation in this industry, this subsidy may substantially undermine the competitive position of unionized employers and reduce wages for unionized janitors.

Independent of the underlying cause or causes, the lower injury rates and lower cost/injury should result in lower premium costs for unionized employers. However, we did not observe this expected impact.

Unionized employers have several potential options for avoiding the higher premium rates observed here:

- Large-deductible policies: A number of large unionized janitorial firms already buy policies with large deductibles, in some cases, very high. This has the effect of making the firms de facto self-insured, with the insurer acting more as a third-party administrator. The existence of large-deductible policies might explain the higher premium-to-loss ratios that we observed for unionized employers. The premiums reported to the WCIRB are those before deductible credits. Because the majority of risk and loss costs in large-deductible policies are shifted to the firm, neither the firm nor the insurer may be particularly concerned about the initial price which does not reflect the final cost.⁸
- Group self-insurance: Self-insurance groups (SIGs) have been popular among some groups of firms in an industry as a way of achieving the perceived advantages of self-insurance. SIGs are typically more popular with smaller firms in industries with higher-risk-class codes.
- Retrospective insurance: Some employers buy policies for which they assume part of the risk by having the insurer recalculate the insurance premium to reflect the actual experience, within limits after the losses have developed to a pre-specified maturity level.

⁸ Many assessments imposed by DIR and CIGA are based on the gross premium (before deductible credits). Consequently, even if the employer is assuming nearly all the risk and not paying the recorded premium, the assessments are still substantial, and the employer would overpay these charges.

These three alternatives are all currently available to unionized firms but require an assumption of substantial risk, especially for smaller firms. An alternative is to have the WCIRB develop a separate class code for unionized firms. Split-class codes were originally developed by the WCIRB in the 1980s for the construction industry. Unionized construction firms paid substantially higher wages than non-unionized firms. Before deregulation, this meant that unionized firms were substantially subsidizing non-unionized firms because premium rates are calculated as a percentage of payroll. Premiums as a percentage of payroll are currently from 50% to 200% higher for the low-wage (non-unionized) construction trades than for the high-wage split class.

Creating a split class covering unionized janitorial firms involves a number of challenges. Most important, split classes have been defined based on wage levels. This works well for the construction trades, in which the spread between the low-wage, non-unionized workers and the higher-wage, unionized workers is quite wide. In the janitorial industry, the wage differential is probably not very large, because the wages for nearly all these workers are low. What sets the unionized firms apart is that they offer health-care benefits and often retirement and other benefits. For low-wage workers, health-care benefits can represent 25%–40% of compensation. The WCIRB has resisted the creation of new split classes because of the additional cost, complexity, and auditing required.⁹ This resistance would likely be greater if the dimension across which the class applied were the absence or presence of health-care benefits.

One final note: the findings here might also inform how the substantial changes in the California minimum wage will raise costs for employers and create the same as dynamic explored above, which might affect worker injury rates across all industries. The minimum wage was increased to \$10.00/hour as of January 1, 2016 (California Senate Bill 3) and will continue to rise, until it is \$15.00/hour in 2022. These minimum wage changes are of the same magnitude as the cost of health-care benefits for unionized workers. If higher compensation costs for unionized workers had been associated with higher injury rates, we might be concerned that increasing the minimum wage would have similar consequences. But the better safety record at unionized janitorial firms should allay fears that large increases in the minimum wage will lead to higher (i.e., worse) injury rates.

⁹ Some evidence indicates that lower-wage employers have abused the split-class codes in the construction industry by misreporting low-wage payroll as high-wage payroll (Neuhauser & Donovan, 2007b). This harms both insurers and employers that are correctly reporting payroll.

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